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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,318	10/22/2003	David M. Shamine	03-274	2187
60782	7590	03/29/2007	EXAMINER	
CATERPILLAR c/o LIELL & MCNEIL ATTORNEYS PC P.O. BOX 2417 511 SOUTH MADISON STREET BLOOMINGTON, IN 47402-2417			CHRISTENSEN, RYAN S	
			ART UNIT	PAPER NUMBER
			2856	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	03/29/2007		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/691,318	SHAMINE, DAVID M.
	Examiner	Art Unit
	Ryan Christensen	2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 December 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-8 and 17-20 is/are allowed.
 6) Claim(s) 9-12 is/are rejected.
 7) Claim(s) 13-16 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/22/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments and amendments, with respect to claim 1 have been fully considered and are persuasive. The rejection of claim 1 has been withdrawn.
2. Applicant's arguments, with respect to claim 17 have been fully considered and are persuasive. The rejection of claim 17 has been withdrawn.
3. With respect to claim 9, applicants arguments have been fully considered and are not persuasive.
4. Applicant argues Greco does not teach all the features of claim 9, specifically each of a plurality of leak lines being fluidly connected to a leak line. However, the examiner is giving leak diagnostic port its broadest reasonable interpretation. A port is merely an opening. There is implicitly an opening at the "end" of each leak line as they empty into a single collection line or some space before arriving at the wet sensor. Because the "ports" are evacuating the fluids towards the wet sensor they are considered to be "leak diagnostic ports." Because Greco discloses more than one area for leak testing, there is necessarily more than one leak line. Likewise, U.S. patent Publication Application 2002/0044060 (Berg) is considered to have a plurality of leak diagnostic ports.
5. With respect to claims 12, Applicant argues the features of their claimed invention are not taught by Greco. However, based on a broad interpretation of the "leak diagnostic port" and Greco's teaching of a wet sensor and multiple leak

lines it is the examiners view the structure for connecting the multiple lines to one sensor is either implicitly disclosed or obvious. The applicant further argues identifying the leak origin as a patentable distinct advantage. However, there is no language directed to this feature in claim 12.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
7. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,817,343 (Greco et al.). The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.
8. With respect to claim 9, Greco et al. disclose a plurality of high pressure fuel spaces (Col. 4 line 58 to Col. 5, line 12 disclose both high pressure fuel lines 13, and a high pressure pump 20) and a plurality of leak lines connected to capture

fuel leaking from the plurality of high spaces (Col. 4 line 58 to Col. 5, line 12).

Greco et al. further disclose a wet sensor connected to the plurality of leak lines.

The wet sensor is disclosed as being connected to the rail leak lines and possibly other areas of high pressure. The openings that connect the leak lines to the wet sensor or to a common cavity connected to the wet sensor are considered to be "diagnostic ports". Because there are a plurality of leak lines disclosed there are considered to be a plurality of diagnostic ports. Fuel is evacuated from any line connected to the port because it passes through the port in order to arrive at the wet sensor where a leak determination can be made.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2856

11. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,817,343 (Greco et al.).
12. With respect to claim 12, Greco et al. do not explicitly disclose how to connect the leak lines to the wet sensor. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Greco et al. by providing a common line which collected leaked fluids from each of the leak and is connected to the wet sensor because several leak lines are disclosed and only one wet sensor is.
13. Claims 9-11 are rejected under 35 U.S.C. 103 as being anticipated by U.S. Patent 7,051,576 (Hutchinson et al.).
14. With respect to claim 9, Hutchinson et al. disclose a plurality tanks (Col. 1, lines 20-30) with means for pumping fuel to the surface which are considered to be high pressure spaces. Hutchinson et al. also disclose leak lines for collecting leaked fluid (double walled lines, Col. 1, line 66 to Col. 2, line 10). The valve (96) for evacuating fluid from the leak lines is considered to be a "diagnostic port."
15. Hutchison discloses the tank being underground at a service station. There is no explicit disclosure of a second tank, which would include a second diagnostic port and thus a plurality of diagnostic ports. However, it is well known that service stations typically contain more than one underground tank. The plurality of tanks at a service station are considered to be part of the service stations fuel system and they are considered to contain at least one valve (96) in each tank for a plurality of diagnostic ports connected to the leak lines of each tank.

16. With respect to claim 10, Hutchinson et al. disclose a cavity (trap conduit, 92, Fig. 3) located between the leak line (56, Fig. 3) and the "diagnostic port" (96, Fig. 3) for capturing fuel from the leak line.
17. With respect to claim 11, the valve (96) comprises a separate closure for opening and closing each of the said leak diagnostic ports.

Allowable Subject Matter

18. Claims 1-8 and 17-20 are allowed.
19. Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
20. The primary reason for the allowance of claim 1 is the inclusion of the plurality of cavities. It is this features found in the claim, as claimed in the combination the other limitation that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.
21. The primary reason for the allowance of claim 17 is the inclusion of multiple ports where each port is opened until fuel is evacuated and identifying the source of the leak by determining which high pressure space is associated with the leak line containing fuel.

Pertinent Prior Art

Art Unit: 2856

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
23. U.S. Patent Application Publication 2002/044060 (Berg) anticipates claims 9 and 12.
24. Detroit Diesel Technician Guide, at Figures 95-97 discloses a leak return line returning to a junction block with a leak sensor. Due to the quality of the scanned images that is all that can be ascertained from these figures.

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
26. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Christensen whose telephone number is

571-272-2683. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RC



Hezron S. Williams
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